



holland heating

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ISO 9001 : 2000



Order No.: 13952-20, 10.2006. Supersedes order No.: New.
Manufacturer reserves the right to change any product specifications without notice.
Printed in the Netherlands on chlorine-free paper.



39HQ

Package air handling unit with intelligent control 1.8 - 11.1 m³/s



Concentrated forces



AiroQ, a total solution

'To be our customers' first choice for air conditioning, heating and refrigeration solutions everywhere around the world.' That is Carrier's mission.

With air handling unit factories world-wide Carrier is the leading manufacturer in this field. Customised solutions are our speciality, and our very diverse product offer meets market demands perfectly. There is an optimal solution for every application and our products are found wherever people live, work or play.

AiroQ is the most recent development success of the technical cooperation between Carrier and Carrier Holland Heating and combines the full experience and expertise of these two companies. With the AiroQ specific know-how in controls technology, air treatment and cooling are combined in one product. Integrated air conditioning components (DX), manufactured by the Carrier organisation, are incorporated into a Carrier Holland Heating air handling unit. This complementary combination of two expert skills forms the basis for a unique high-quality product. The AiroQ is controlled by specially developed Carrier DDC controls and communicates with all modern building management systems using standard protocols.

The product development is based on proven technologies and many years of expertise in the field of climate control, and guarantees low installation and maintenance costs for the customer. The AiroQ meets all European (e.g. EN1886) and national standards. The modular 39HQ concept that is the basis of the AiroQ is Eurovent certified.

The AiroQ concept offers an expertly conceived and integrated standard solution for air flows from 1.8 to over 11 m³/s and a cooling capacity of 190 kW.

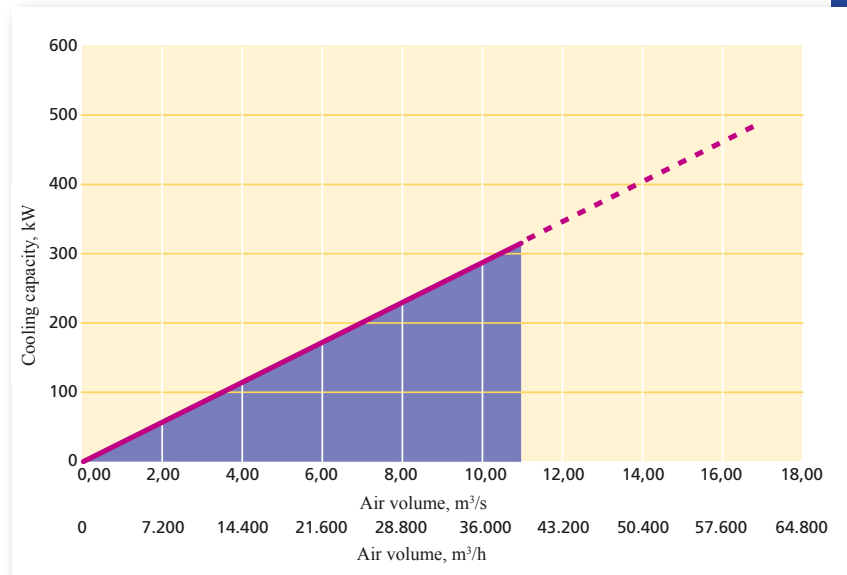
**CONCENTRATED
FORCES**



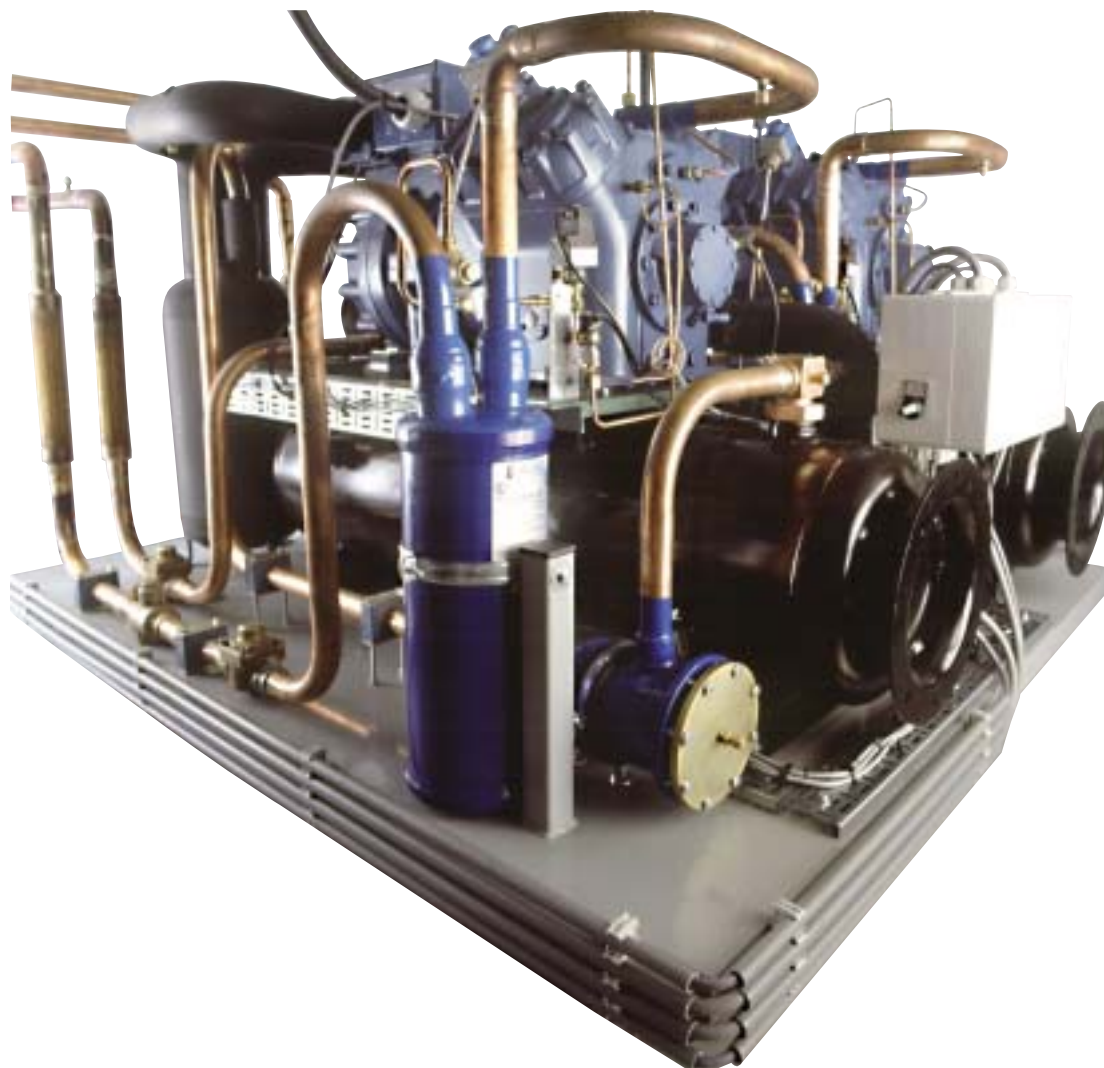
AiroQ is flexible

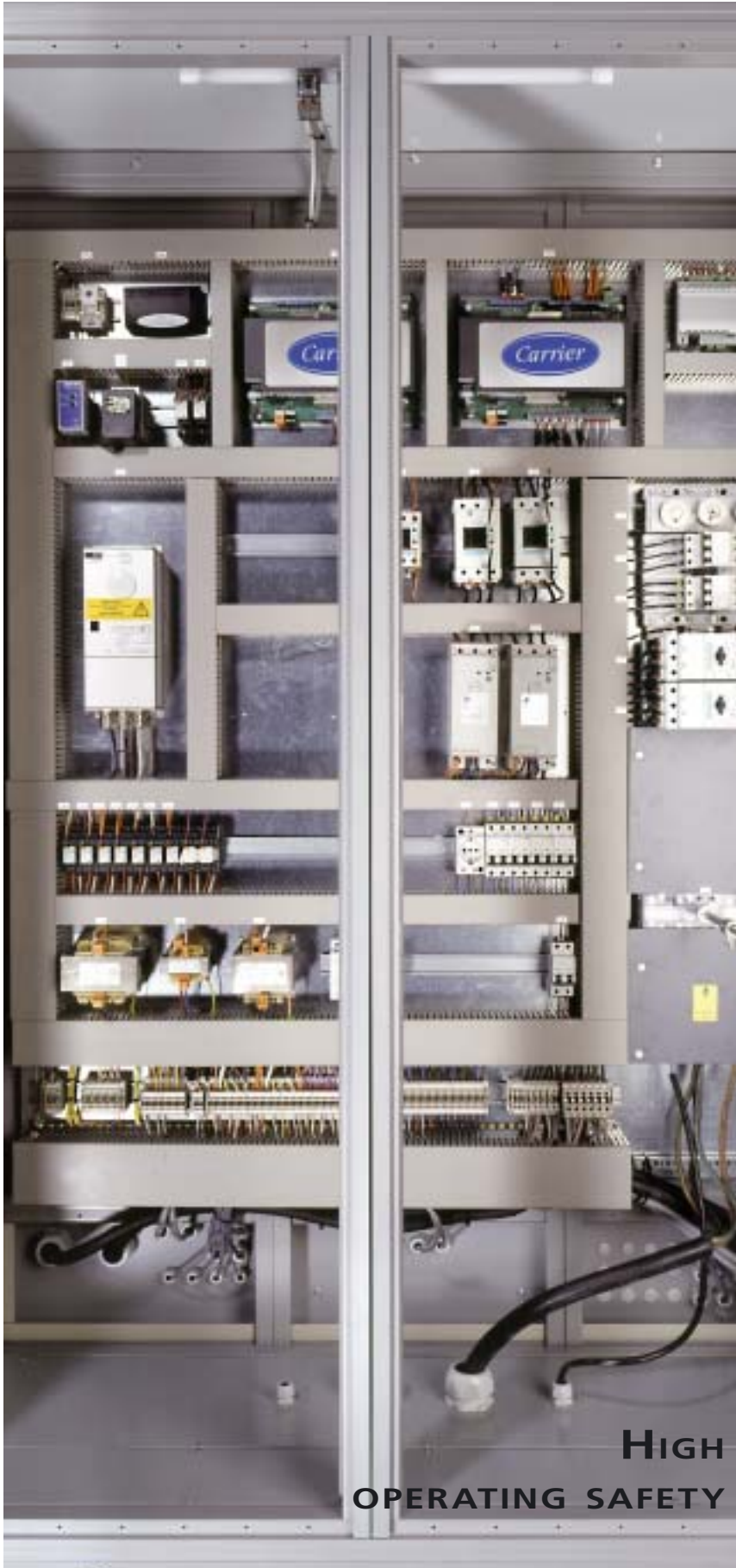
Carrier Holland Heating has to maintain its reputation as the expert in customised air handling solutions. The AiroQ concept fits in well with this tradition! The use of a standard configuration model offers a high degree of flexibility. Customised modifications are of course also possible. That is the power of Carrier Holland Heating!

The AiroQ air handling unit is also available with low-noise fans, as well as various heating coil and sound attenuating options. The product portfolio also includes a choice of humidifiers. For cooling prefabricated modules offer capacities from 24 to 190 kW. More than enough possibilities to change the standard unit to a made-to-measure product.



Total cooling capacity versus air volume at design conditions of 28°C/60% outside air temperature and an supply air temperature of 15°C/95%.





AiroQ is intelligent

Carrier specifically developed the AiroQ software for this air handling unit. In addition to perfect temperature, humidity and air flow control the AiroQ software allows monitoring of a number of important parameters, such as the degree of filter pollution, continuous air flow checks with integrated belt break protection, minimum flow monitoring, speed control and kWh monitoring (smart metering).

This early warning system informs you in advance that maintenance is required. Not when a fault has occurred, but at the time when maintenance can prevent faults. This ensures a high level of operating safety. The early warning system uses a standard built-in modem or a wireless GSM modem (available as an option).

This link with the air handling unit can also be used by service technicians to remotely check that the air handling unit is functioning correctly.

The measuring and control technology of the AiroQ uses open communication, compatible with all standard communication protocols. This means that the AiroQ can easily be connected to practically any building management system.

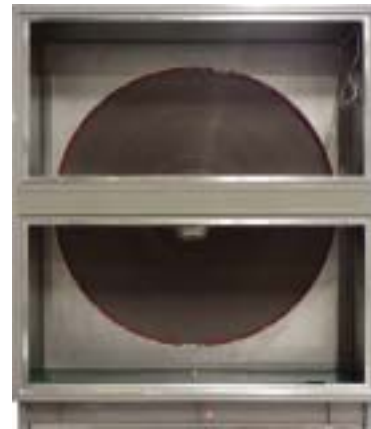
AiroQ is energy efficient

In the AiroQ air handling unit concept efficient energy usage has top priority.

The standard AiroQ is supplied with a sorption heat recovery wheel. With its specific characteristics this ensures constantly high sensible and latent performance, significantly reducing the heating and humidification demands of the system, resulting in savings of over 40% in the mechanical cooling capacity.

The compressors used can be infinitely variable for an optimal match between energy usage and required air temperature.

The fans are selected for low energy consumption, and the electric motors can be supplied with frequency controllers, if required.



A sorption heat recovery wheel is supplied as standard.





PLUG & PLAY

AiroQ: easy installation, high operating safety and durability

In addition to the energy efficiency benefits mentioned the AiroQ air handling unit also offers easy installation, operating safety and durability.

The AiroQ uses the plug & play principle. The complete product is delivered on site, and assembly work is minimised.

With proven production technologies and carefully selected components Carrier Holland Heating supplies a robust unit that ensures problem-free operation and low usage costs.



AiroQ technical data

Size	Double deck	Side by side	Air flow		Total cooling capacity*			Total heat recovery			Nominal compressor power input	Maximum fan power input	Width	Max. width (HR wheel + control box)	Height	Max. height, HR wheel section
			m ³ /s	m ³ /h	kW	Free cooling	Mechanical cooling	kW	SENSIBLE heat recovery**	LATENT heat recovery**						
06.06 / 06.06	X		1.81	6,500	52	21	31	67	48	19	26	11.8	4.8	1058	2067	2400
06.06 / 06.06		X	1.81	6,500	52	21	31	67	48	19	26	11.8	4.8	2116	2645	1058 1760
07.06 / 07.06	X		2.14	7,700	61	24	37	79	57	23	31	14.2	5.6	1218	2227	2400
08.06 / 08.06	X		2.56	9,200	74	27	46	95	68	27	37	20.2	6.6	1378	2387	2400
09.06 / 09.06	X		2.97	10,700	85	30	56	110	79	31	43	22.7	7.7	1538	2387	2400
10.06 / 10.06	X		3.33	12,000	96	38	58	124	89	35	48	22.7	8.6	1698	2547	2400
08.08 / 08.08		X	3.61	13,000	104	40	63	134	96	38	52	24.0	9.2	2756	3285	1378 2240
11.06 / 11.06	X		3.75	13,500	108	42	66	139	100	39	54	24.0	9.6	1858	2387	2400
09.08 / 09.06	X		3.89	14,000	112	44	67	144	103	41	56	24.0	9.9	1538	2707	2720
12.06 / 12.06	X		4.17	15,000	120	45	74	155	111	44	60	28.4	11.0	2018	2547	2400
10.08 / 10.06	X		4.17	15,000	120	45	74	155	111	44	60	28.4	10.6	1698	2867	2720
10.08 / 10.08	X		4.58	16,500	132	46	86	170	122	48	66	37.1	11.7	1698	2867	3040
13.06 / 13.06	X		4.58	16,500	132	45	86	170	122	48	66	37.1	12.0	2178	2707	2400
11.08 / 11.06	X		4.72	17,000	136	48	87	175	126	50	68	37.1	12.0	1858	2867	2720
14.06 / 14.06	X		5.00	18,000	144	53	90	186	133	53	72	37.1	13.0	2338	2867	2400
12.08 / 12.06	X		5.00	18,000	144	53	90	186	133	53	72	37.1	12.7	2018	3027	2720
11.08 / 11.08	X		5.19	18,700	149	59	90	193	138	55	75	37.1	13.2	1858	2867	3040
09.10 / 09.10		X	5.28	19,000	152	61	90	196	140	56	76	37.1	13.4	3076	3605	1698 2560
12.08 / 12.08	X		5.83	21,000	167	62	105	216	155	61	84	44.2	14.7	2018	3027	3040
10.10 / 10.10		X	5.83	21,000	167	62	105	216	155	61	84	44.2	14.7	3392	3925	1698 2560
13.08 / 13.08	X		6.08	21,900	175	67	107	226	162	64	88	44.2	15.4	2178	3027	3040
14.08 / 14.08	X		6.81	24,500	196	67	129	253	181	72	98	44.2	17.4	2338	3187	3040
10.12 / 10.12		X	7.08	25,500	203	76	128	263	188	74	102	51.8	17.8	3396	3925	2018 2880
15.08 / 15.08	X		7.36	26,500	211	78	133	273	196	77	106	44.2	18.8	2498	3027	3040
16.08 / 16.08	X		7.92	28,500	227	89	139	294	211	83	114	51.8	20.2	2658	3187	3040
17.08 / 17.08	X		8.47	30,500	243	98	145	314	225	89	122	51.8	21.6	2818	3347	3040
18.08 / 18.08	X		9.03	32,500	259	97	163	335	240	95	130	53.1	23.0	2978	3507	3040
17.10 / 17.08	X		9.44	34,000	271	107	165	350	251	99	136	53.1	23.7	2818	3347	3360
18.10 / 18.08	X		10.00	36,000	287	104	184	371	266	105	144	61.5	25.1	2978	3507	3360
19.10 / 19.08	X		10.56	38,000	303	113	191	392	281	111	152	61.5	26.4	3138	3667	3360
20.10 / 20.08	X		11.11	40,000	319	129	191	412	295	117	160	84.1	27.8	3298	3827	3360

* Based on design conditions: outside air 28°C/60% rh, return air 25°C/50% rh, supply air 15°C/95% rh

**Based on design conditions: outside air -10°C/90% rh, return air 22°C/40% rh